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Comments on High-Level Waste and The Yucca Mountain Repository

Here are schedule and cost comments about radioactive high-level waste and Yucca Mountain.

First some things to keep in mind as I speak.

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There are three major parties:

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1. The Radioactive Waste group within DOE, or RW
2. The civilian electric utilities using nuclear power to make electricity, or the nuclear utilities, and
3. The Defense Production group within DOE making materials for weapons, or DP

The Nuclear Waste Policy Act of 1982 has four major features, among others. These mandated:

1. The repository would open January 31, 1998 – 21 months ago,
2. A fee for electricity generated by nuclear of 1 mill/kwhr (e), or 1/10<sup>th</sup> of a cent,
3. An equivalent fee for defense high-level waste, and
4. The earliest waste goes first.

All three DP sites are older than the oldest civilian nuclear electric plant:

1. Hanford is 1944
2. Idaho is 1951 or 1952
3. Savannah River is 1953
4. Dresden 1 in Illinois is 1960

Now, some facts:

1. A gram of fissile material undergoing fission will produce the same quantity of radioactive waste, called fission products, regardless of whether a civilian or Defense Production reactor is used.
2. Most electric plants have a thermal efficiency of around 33%; that is, 1 kilowatt-hour of electricity is produced by about 3 kilowatt-hours of thermal power.
3. The electric rate at the best nuclear plant is about 2 cents/kwhr and is as high as 7 cents/kwhr at some.
4. Of all the radioactive waste produced, and to be produced, in the US, the DP share is about 3-5% and the civilian share about 95-97% on a gram or kwhr basis.
5. The utilities, mandated by law, started paying their fees on schedule as given in the NWPA. The DP folks, financed by Congress, were quite late in starting to pay into the waste disposal fund.
6. The cost of the whole repository program has been estimated at about \$40 billion.
7. I don't know how much taxpayer money DP has paid but the last numbers I saw years ago had DP paying not 5% of what the utilities were paying, but an equal amount. About \$250 million each.

Next, where does the money come from?

1. Almost everyone in the US pays taxes and is defended by the nuclear weapons of the DOD, but
2. Only those getting electricity from nuclear plants are paying their electric bills to those utilities.

So the taxpayer is NOT the same person as the one who buys nuclear power.

Lastly, it is important to realize that a repository to isolate the radioactive waste from humans is needed only because of radioactivity. No radioactivity – no disposal and isolation requirements – no repository.

So we are addressing the issues about Yucca Mountain only because of the radioactive fission products.

Now some conclusions I draw from things I've just said.

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Timing (and it has costs associated with it)

1. Yucca should have started taking waste 21 months ago. The nuclear power folks and DP should get together and sue the pants off the RW folks for being late because RW put them to extra costs to hold waste longer. Suing? Chance of success is zilch. Winning a lawsuit? Chance is zilch squared!
2. DP waste is older, even at the newest plant (SRS), by seven years than at the oldest civilian plant. Thus DP waste should go first. But, RW has scheduled DP to wait five years after the civilians start having their waste accepted. Were DP taken first, SRS might not have to build another glass waste storage building. Chance of redress here is zilch. The taxpayers will take it on the chin once again.

Costs (Isn't this really the bottom line?)

1. Because 1 kwhr (e) is made by 3 kwhr (thermal), the cost for the utilities should be 1/3 of a mill/kwhr (thermal) or 1/30<sup>th</sup> of a cent per kwhr (thermal).
2. Because a kwhr (thermal) at any plant – civilian or DP, will produce the same amount of radioactive waste, shouldn't the fee be the same for both? The law says so. Namely, 1/3 mill/kwhr (thermal) for civilian and DP. After all, we are only disposing of identical quantities of fission products, which will have the same risk per gram, or per kwhr (thermal) or per any other measure.
3. Here is the punch line! The RW folks have somehow decided that DP should be charged about 10 billion, or 25% of the cost, not 2 billion (or 5%), which would be equivalent to the DP share of fission products (or risk) disposed of. Do you tax payers feel happy about being taxed 8 billion extra to subsidize the nuclear plants? I'll bet not!
4. Think what the feds might use that extra 8 billion for. There are plenty of good federal programs that could use help. But I fear that the DP folks don't have as strong a lobby as the utilities do. So, once again, I think the chances for any corrections will be zilch.
5. If the most efficient plant sells juice for 2 cents per kwhr (e), the disposal fee is only 5% of their income from that plant. Isn't that really quite a bargain? The waste would be gone irretrievably forever. What a deal! And for the plants at 7 cents per kwhr, the percent for the disposal fee is 1/10<sup>th</sup> cent divided by 7 cents, or less than 1 1/2 %. A whopper of a bargain. All gained at the taxpayers expense.
6. And as I've mentioned before, if the SRS wastes don't go first but wait for five extra years, we may wind up with another glass waste storage building. Built at great expense to the taxpayers. The chance of our SRS waste being taken first? I'll bet it is zilch!

Well, I just thought I'd float these data by you. I don't hold any hope for any relief for the taxpayer or any actions being taken that are in true compliance with the law. But I do want these things known. So I leave them with you. I have handouts of my words so you can see them in case I spoke too rapidly.

Would you please ensure that my remarks here tonight are printed and are fully answered in print by DOE in their EIS. Please also ensure that minor errors on my part, like numbers that are approximate or acronyms that may have changed, are no cause for DOE to provide non-answers or picayune quibbling as they have done in the past. A straight answer for the sake of citizens and taxpayers is requested.

Thank you,

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